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Section:	Prescription Drugs	**Effective Date:**	April 1, 2025
Subsection:	Antineoplastic Agents	**Original Policy Date:**	September 22, 2017
Subject:	Mylotarg	**Page:**	1 of 4

Last Review Date: March 7, 2025

Mylotarg

Description

Mylotarg (gemtuzumab ozogamicin)

Background
Mylotarg (gemtuzumab ozogamicin) is a CD33-directed antibody-drug conjugate. The conjugate binds to CD33-expressing tumor cells and induces cell cycle arrest and apoptopic cell death. Mylotarg is indicated for the treatment of CD33-positive acute myeloid leukemia (AML) which is a rapidly progressing cancer that forms in the bone marrow and results in an increased number of abnormal white blood cells in the bloodstream and bone marrow (1).

Regulatory Status
FDA-approved indications: Mylotarg is a CD33-directed antibody-drug conjugate indicated for: (1)

1. Treatment of newly-diagnosed CD33-positive acute myeloid leukemia (AML) in adults and pediatric patients 1 month and older
2. Treatment of relapsed or refractory CD33-positive AML in adults and in pediatric patients 2 years and older

Mylotarg has a boxed warning for hepatotoxicity, including life-threatening and sometimes fatal hepatic VOD events, which have been reported in patients receiving Mylotarg as a single agent or as part of a combination chemotherapy regimen. It is recommended to assess ALT, AST, total bilirubin, and alkaline phosphatase prior to each dose of Mylotarg. Also, physicians should monitor for signs and symptoms of VOD; these may include elevations in ALT, AST, total bilirubin, hepatomegaly, rapid weight gain, and ascites (1).

The safety and effectiveness of Mylotarg in pediatric patients less than 1 month of age with newly-diagnosed de novo AML have not been established. The safety and effectiveness of Mylotarg as a single agent in pediatric patients less than 2 years of age with relapsed or refractory AML have not been established (1).

Related policies

Policy

This policy statement applies to clinical review performed for pre-service (Prior Approval, Precertification, Advanced Benefit Determination, etc.) and/or post-service claims.

Mylotarg may be considered **medically necessary** if the conditions indicated below are met.

Mylotarg may be considered **investigational** for all other indications and ages.

Prior-Approval Requirements

Diagnoses

Patient must have **ONE** of the following:

1. Relapsed or refractory CD33-positive acute myeloid leukemia (AML)
    a. 2 years of age or older
2. Newly-diagnosed CD33-positive acute myeloid leukemia (AML)
    a. 1 month of age or older
    b. Age 1 month – 17 years of age **only**: used in combination with standard chemotherapy

AND ALL of the following:

1. CD33-positive AML as detected by FDA-approved test
2. Prescriber agrees to monitor ALT, AST, total bilirubin, and alkaline phosphatase prior to each dose of Mylotarg

Prior – Approval *Renewal* Requirements

Age 1 month of age or older

Diagnosis

Patient must have the following:

CD33-positive acute myeloid leukemia (AML)

AND ALL of the following:

a. **NO** disease progression or unacceptable toxicity
b. Prescriber agrees to monitor ALT, AST, total bilirubin, and alkaline phosphatase prior to each dose of Mylotarg

Policy Guidelines

Pre - PA Allowance

None

Prior - Approval Limits

Duration 12 months

Prior – Approval *Renewal* Limits

Same as above

Rationale

Summary

Mylotarg (gemtuzumab ozogamicin) is a CD33-directed antibody-drug conjugate indicated for the treatment of acute myeloid leukemia (AML). Mylotarg has a boxed warning for hepatotoxicity. The safety and effectiveness of Mylotarg in pediatric patients less than 1 month of age with newly-diagnosed de novo AML have not been established. The safety and effectiveness of Mylotarg as a single agent in pediatric patients less than 2 years of age with relapsed or refractory AML have not been established (1).

Prior approval is required to ensure the safe, clinically appropriate, and cost-effective use of Mylotarg while maintaining optimal therapeutic outcomes.

References

1. Mylotarg [package insert]. Philadelphia, PA: Wyeth Pharmaceuticals Inc.; August 2021.
2. NCCN Drugs & Biologics Compendium® Gemtuzumab ozogamicin 2025. National Comprehensive Cancer Network, Inc. Accessed on January 9, 2025.

Policy History

Date	Action
September 2017	Addition to PA
December 2017	Annual review
June 2018	Annual editorial review
March 2019	Annual review and reference update
June 2020	Annual review and reference update. Revised age requirement for newly-diagnosed AML from 18 and older to 1 month and older. Also added requirement that patients 1 month to 17 years old for newly-diagnosed AML have to use with standard chemotherapy
September 2020	Annual review
June 2021	Annual editorial review and reference update
June 2022	Annual review and reference update
March 2023	Annual editorial review and reference update. Rearranged initiation criteria for clarity
December 2023	Annual review and reference update
June 2024	Annual review and reference update
December 2024	Annual review and reference update
March 2025	Annual review and reference update

Keywords

This policy was approved by the FEP® Pharmacy and Medical Policy Committee on March 7, 2025 and is effective on April 1, 2025.